THAT WHICH IS CLAIMED:

1. An isolated nucleic acid molecule comprising a nucleotide sequence selected from the group consisting of:

(a) a nucleotide sequence having at least 90% identity to the sequence set forth in SEQ ID NO: 7;

(b) a nucleotide sequence having at least 90% identity to the sequence set forth in SEQ ID NO: 8;

(c) a nucleotide sequence that hybridizes under stringent conditions to at least one nucleotide sequence selected from the group consisting of the nucleotide sequence set forth in SEQ ID NO: 7 and the nucleotide sequence set forth SEQ ID NO: 8, said stringent conditions comprising hybridization at 37°C in 50% formamide, 1 M NaCl, and 1% SDS and a wash in 0.1X SSC at 60 to 65°C; and

(d) a nucleotide sequence that is fully complementary to a nucleotide sequence selected from the group consisting of the nucleotide sequences set forth in (a)-(c);

wherein said nucleotide molecule encodes a P-glycoprotein that controls plant growth or said nucleotide molecule is complementary to a nucleotide sequence that encodes said P-glycoprotein.

2. An expression cassette comprising the nucleic acid molecule of claim 1, said nucleotide sequence operably linked to a promoter that drives expression in a plant cell.

3. The expression cassette of claim 2, wherein said promoter is selected from the group consisting of tissue-preferred, constitutive, chemically regulatable, and pathogen-inducible promoters.

4. An isolated nucleic acid molecule comprising a nucleotide sequence selected from the group consisting of:

(a) a nucleotide sequence having at least 95% identity to the sequence set forth in SEQ ID NO: 7;

(b) a nucleotide sequence having at least 95% identity to the sequence set forth in SEQ ID NO: 8; and

(c) a nucleotide sequence that is fully complementary to a nucleotide sequence selected from the group consisting of the nucleotide sequences set forth in (a)-(b);

wherein said nucleotide molecule encodes a P-glycoprotein that controls plant growth or said nucleotide molecule is complementary to a nucleotide sequence that encodes said P-glycoprotein.

5. A transformed plant comprising stably incorporated into its genome a nucleic acid molecule operably linked to a promoter that drives expression in a plant cell, wherein said nucleic acid molecule comprises a nucleotide sequence selected from the group consisting of:

(a) a nucleotide sequence having at least 90% identity to the sequence set forth in SEQ ID NO: 7;

(b) a nucleotide sequence having at least 90% identity to the sequence set forth in SEQ ID NO: 8;

(c) a nucleotide sequence that hybridizes under stringent conditions to at least one nucleotide sequence selected from the group consisting of the nucleotide sequence set forth in SEQ ID NO: 7 and the nucleotide sequence set forth SEQ ID NO: 8, said stringent conditions comprising hybridization at 37°C in 50% formamide, 1 M NaCl, and 1% SDS and a wash in 0.1X SSC at 60 to 65°C; and

(d) a nucleotide sequence that is fully complementary to a nucleotide sequence selected from the group consisting of the nucleotide sequences set forth in (a)-(c);

wherein said nucleotide molecule encodes a P-glycoprotein that controls plant growth or said nucleotide molecule is complementary to a nucleotide sequence that encodes said P-glycoprotein.

6. The plant of claim 5, wherein said promoter is selected from the group consisting of tissue-preferred, constitutive, chemically regulatable, and pathogen-inducible promoters.

7. The plant of claim 5, wherein said nucleic acid molecule is operably linked to said promoter in the antisense orientation.

8. The plant of claim 5, wherein said plant is a monocot.

9. The plant of claim 8, wherein said monocot is selected from the group consisting of maize, wheat, rice, sorghum, rye, millet and barley.

10. The plant of claim 5, wherein said plant is a dicot.

11. The plant of claim 10, wherein said dicot is selected from the group consisting of soybeans, sunflowers, safflowers, alfalfa, *Brassica* sp., cotton, peanuts and fruit trees.

12. Transformed seed of the plant of claim 5.

13. Transformed seed of the plant of claim 6.

14. Transformed seed of the plant of claim 7.

15. Transformed seed of the plant of claim 8.

16. Transformed seed of the plant of claim 9.

17. Transformed seed of the plant of claim 10.

18. Transformed seed of the plant of claim 11.

19. A method for modifying the growth of a plant, said method comprising transforming a plant with a nucleic acid molecule encoding a P-glycoprotein, said nucleic acid molecule operably linked to a promoter that drives expression of said nucleic acid molecule in said plant, said nucleic acid molecule comprising a nucleotide sequence selected from the group consisting of:

(a) a nucleotide sequence having at least 90% identity to the sequence set forth in SEQ ID NO: 7;

(d) a nucleotide sequence having at least 90% identity to the sequence set forth in SEQ ID NO: 8;

(c) a nucleotide sequence that hybridizes under stringent conditions to at least one nucleotide sequence selected from the group consisting of the nucleotide sequence set forth in SEQ ID NO: 7 and the nucleotide sequence set forth SEQ ID NO: 8, said stringent conditions comprising hybridization at 37°C in 50% formamide, 1 M NaCl, and 1% SDS and a wash in 0.1X SSC at 60 to 65°C; and

(d) a nucleotide sequence that is fully complementary to a nucleotide sequence selected from the group consisting of the nucleotide sequences set forth in (a)-(c);

wherein said nucleotide molecule encodes a P-glycoprotein that controls plant growth or said nucleotide molecule is complementary to a nucleotide sequence that encodes said P-glycoprotein, and wherein the growth of said transformed plant is modified.

20. The method of claim 19, wherein said nucleic acid molecule is operably linked to said promoter in the antisense orientation.

21. The method of claim 19, wherein the height of said plant is reduced.

22. The method of claim 19, wherein the transformed plant has a stable dwarf phenotype.

23. The method of claim 19, wherein said plant is a monocot.

24. The method of claim 23, wherein said monocot is selected from the group consisting of maize, wheat, rice, sorghum, rye, millet and barley.

25. The method of claim 22, wherein said transformed plant is a stable dwarf sorghum plant.

26. The method of claim 25, wherein said stable dwarf sorghum plant is used in commercial sorghum production.

27. A transformed plant cell comprising stably incorporated into its genome a nucleic acid molecule operably linked to a promoter that drives expression in a plant cell, wherein said nucleic acid molecule comprises a nucleotide sequence selected from the group consisting of:

(a) a nucleotide sequence having at least 90% identity to the sequence set forth in SEQ ID NO: 7;

(b) a nucleotide sequence having at least 90% identity to the sequence set forth in SEQ ID NO: 8;

(c) a nucleotide sequence that hybridizes under stringent conditions to at least one nucleotide sequence selected from the group consisting of the nucleotide sequence set forth in SEQ ID NO: 7 and the nucleotide sequence set forth SEQ ID NO: 8, said stringent conditions comprising hybridization at 37°C in 50% formamide, 1 M NaCl, and 1% SDS and a wash in 0.1X SSC at 60 to 65°C; and

(d) a nucleotide sequence that is fully complementary to a nucleotide sequence selected from the group consisting of the nucleotide sequences set forth in (a)-(c);

wherein said nucleotide molecule encodes a P-glycoprotein that controls plant growth or said nucleotide molecule is complementary to a nucleotide sequence that encodes said P-glycoprotein.